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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,102	03/23/2004	Ricky A. Massey	P68924US0	1874

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EXAMINER

TORRES, ALICIA M

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,102

Applicant(s)

MASSEY ET AL.

Examiner

Alicia M Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Abstract

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

2. Claim 19 is objected to because of the following informalities: the unit is missing from "10 to 15". Appropriate correction is required.

DETAILED ACTION

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 5, 8 and 10-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Rutt et al, hereafter Rutt.

In regards to claims 1, 2, 4 and 8, Rutt discloses a pepper harvester comprising an operator controlled vehicular structure (10) capable of movement along rows of pepper plants having mature pods thereon, the vehicular structure (10) including a forwardly extending header (100) with generally parallel row picking units (150) mounted thereon, each picking unit (150)

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comprising a plurality of generally parallel picking bars (155) moving in an orbital path, a rotatable support member (151, 153) connected to each of the forward and rearward ends of the picking bars (155), a plurality of picking fingers (157) extending laterally from one side of each of the picking bars (155), the picking bars (155) being oriented with a leading end lower than a trailing end, each of the bars (155) being moved longitudinally during rotation of the rotatable support members (151, 153) a distance equal to the diameter of the rotational movement of each of the picker bars (155) to move the picking fingers (157) an increment of vertical and longitudinal movement during each cycle of orbital movement, the picking fingers (157) on opposed picking bars (155) being disposed in opposed relation to enter a pepper plant from opposite sides at a low elevation, each of the opposed picking fingers (157) terminating in tip ends that are laterally spaced from each other and generally in laterally aligned relation when moving upwardly in relation to pepper plants (see Figure 7), the orbital movement of the picking bars (155) and picking fingers (157) and the rotation speed of the rotatable support members (151, 153) being such that the picking fingers (157) move vertically in relation to the pepper plants as the picking fingers (157) move in an orbital path in relation to the pepper plants, as per claim 1; and

Wherein the rotatable support members (151, 153) are lightweight circular disks, each of the picking bars (155) being of hollow rigid construction (to allow bolts to pass through, see column 5, lines 50-55) and each of the picking fingers (157) being of tapered resilient construction (see column 5, lines 37-41), as per claim 2; and

Wherein the picking fingers (157), the picking bars (155) and rotatable support members (151, 153) include upper surfaces that are inclined upwardly toward the pepper plants to form a

laterally inclined supporting path of movement for peppers removed from the pepper plants, as per claim 4; and

Wherein each picking unit (150) includes forwardly extending, outwardly inclined guides (122) spaced laterally from each other to provide an unobstructed access of pepper plants to the opposed picking fingers (157), the picking fingers (157) on the picking bars (155) being inclined upwardly to convey peppers picked from pepper plants transversely of the picking bars (155) and fingers (157) into a longitudinal conveying structure (180) alongside the picking unit (150) to convey peppers to a rearward portion of the header (100), as per claim 8.

5. In regards to claim 5, Rutt discloses a pepper harvester comprising an operator controlled vehicular structure (10) capable of movement along rows of pepper plants having mature pods thereon, the vehicular structure (10) including a forwardly extending header (100) with generally parallel row picking (150) units mounted thereon, each picking unit (150) comprising a plurality of generally parallel picking bars (155) moving in an orbital path, a rotatable support member (151, 153) connected to the forward and rearward ends of the picking bars (155), a plurality of picking fingers (157) extending laterally from one side of each of the picking bars (155), the picking bars (155) being oriented with a leading end lower than a trailing end, each of the bars (155) being moved an increment of vertical and longitudinal movement during each cycle of orbital movement, the picking fingers (157) on opposed picking bars (155) being disposed in opposed relation to enter a pepper plant from opposite sides at a low elevation, each of the opposed picking fingers (157) terminating in tip ends that are laterally spaced from each other and generally in laterally aligned relation when moving upwardly in relation to pepper plants as

the picking units (150) move forwardly thereby enabling the pepper plant and branches to be pulled through the space between the picking fingers (157) to remove pepper pods from the pepper plants, the orbital movement of the picking bars (155) and picking fingers (157) and the rotation speed of the rotatable support members (151, 153) being such that the picking fingers (157) move in an orbital path in relation to the pepper plants;

The picking fingers (157), the picking bars (155) and rotatable support members (151, 153) including upper surfaces that are inclined upwardly toward the pepper plants to form a laterally inclined supporting path of movement for peppers removed from the pepper plants; and

Each picking unit (150) including a flat conveyor surface (170) laterally of the picking bars (155) to receive removed peppers from the inclined supporting path of movement for peppers removed from the pepper plants, and a chain conveyor (180) adjacent the flat conveyor surface (170), the chain conveyor (180) being movable along the flat conveyor surface (170) to move peppers removed from pepper plants rearwardly on the flat conveyor surface (170), as per claim 5.

6. In regards to claim 10-14, Rutt discloses a harvester for removing pod-like products from plants comprising a powered, operator controlled vehicle (10), a header (100) supported from said vehicle (10) and extending forwardly therefrom, spaced picking means (150) mounted on said header (100), said picking means (150) comprising longitudinally spaced apart rotatably driven support members (151, 153), a plurality of elongated picking bars (155) eccentrically connected to and extending between said rotatable support members (151, 153), a plurality of spaced fingers (157) secured to said bars (155) and projecting laterally therefrom, said bars (155)

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being inclined longitudinally with a forward end positioned lower than a rearward end such that said fingers (157) on said bars (155) move towards each other and simultaneously move upwardly when moving to the rear so as to engage said pod-like products and separate them from the plants on which they grow, said bars (155), fingers (157) thereon and rotatable support members (151, 153) being parallel and inclined upwardly and toward said plants to move said bars (155) and fingers (157) thereon in an orbital vertical and laterally inclined path for moving said products laterally of said picking means (150) and onto conveyor means (170) conveying said pod-like products away from said picking means (150), as per claim 10; and

Wherein the plurality of picking bars (155) are eccentrically connected to support member (151, 153) such that the bars (155) are moved in an orbital path with a portion of the path being closer to the plants being picked when the bars (155) are moving toward the rear of the header (100), as per claim 11; and

Wherein said picking bars (155) are moved rearwardly and upwardly when opposed bars (155) and fingers (157) are moved rearwardly with the rearward movement of the picking bars (155) and picking fingers (157) thereon moving a distance equal to the diameter of the rotational movement of the connection between the ends of the picking bars (155) and the rotatable support members (151, 153), as per claim 12; and

wherein each picking bar (155) includes an increment of longitudinal movement and lateral inward and outward movement equal to the diameter of rotational movement of the connections between the ends of the picking bars (155) and the rotatable support members (151, 153), as per claim 13; and

wherein said rotatable support members (151, 153) are lightweight disks, said picking bars (155) are tubular structural members of rigid construction and said picking fingers (157) being transversely and upwardly inclined toward said plants at an angle such that pod-like products will roll from one picking bar to adjacent generally parallel picking bars onto said conveyor means (170) as the picking bars (155) oscillate in their orbital path of movement, as per claim 14.

7. In regards to claim 15, Rutt discloses a method of harvesting peppers from pepper plants comprising the steps of providing picking fingers (157) disposed on opposite sides of a row of plants, moving said fingers (157) in an orbital path in a manner such that said fingers (157) move cyclically upwardly and downwardly, toward and away from each other and forwardly and rearwardly to engage said peppers and separate them from said plants, the fingers (157) on opposite sides of said plants being mounted on an elongated picker bar (155), each picking bar (155) having a plurality of said fingers (157) secured thereto, a pair of rotatable support members (151, 153) connected to the ends of each picking bar (155) with the ends of the picking bar (155) being eccentrically connected to said support members (151, 153), said picking bars (155) and rotatable support members (151, 153) being inclined upwardly and outwardly to move the picking bars (155) and fingers (157) toward the plant and simultaneously move said picking fingers (157) upwardly and then move said picking fingers (157) away from the plant and then simultaneously move away from the plant and downwardly and inclining downwardly and outwardly to pick peppers from the plants and transfer them laterally and downwardly onto a longitudinal conveying means (170) to convey the peppers to a cleaner assembly (14).

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8. In regards to claims 16-19, Rutt discloses A picking unit for harvesting pod products from row plants comprising at least one pair of parallel picking bars (155) oriented on opposite sides of a row of plants, a driven rotatable support member (151, 153) at each end of each picking bar (155), each picking bar (155) including forward and rearward ends connected to said support members (151, 153) in equally spaced relation to an axis of rotation of each rotatable support member (151, 153) to move said picking bars (155) in an orbital path on opposite sides of a row of plants, a plurality of laterally extending picking fingers (157) on each picking bar (155) such that said fingers (157) on each bar (155) move cyclically toward and away from a row of plants, said rotatable support members (151, 153) at rearward ends of said picking bars (155) being located above said rotatable support members (151, 153) at forward ends of said bars (155) such that said picking fingers (157) move vertically upwardly during cyclical longitudinal movement thereof when said picking fingers (157) have been moved toward each other and toward a row of plants extend under pod products on a row of plants and moving said fingers vertically to engage and move pod products upwardly and in a row as the picking separate the pod products from the plants unit is moved longitudinally along a row of plants, said picking fingers (157) on said opposed picking bars (155) having opposed tip ends in transverse alignment and laterally spaced apart to enable passage of plant stems in a row of plants to pass between said tip ends and adjacent surfaces of said picking fingers (157) during upward and longitudinal movement of said picking fingers (157) when said picking bars (155) and picking fingers (157) are moving in that part of said orbital path in closest opposed relation to remove pod products from a row of plants by moving opposed picking fingers (157) upwardly through the plants, as per claim 16; and

wherein said picking fingers (157), said picking bars (155) and said rotatable support members (151, 153) incline upwardly towards said plants and toward said tip ends of the fingers (157) thereof to provide an inclined support for pods removed from a row of plants for moving said pods laterally toward a conveying structure (170) parallel to and below said picking bars (155) and the tip ends of said fingers (157) that are moving forwardly said opposed picking bars (155) for discharge into a conveyor structure (170), as per claim 17; and

wherein the picking bars (155) are inclined longitudinally, as per claim 18; and

wherein the picking fingers (157), picking bars (155), and rotatable support members (151, 153) are inclined laterally about 10 to 15, as per claim 19.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rutt in view of Cosimati.

The device is disclosed as applied to claim 1 above. However, Rutt fails to disclose wherein the rotatable support members are driven by a hydraulic motor that is safely stopped if the harvester becomes jammed.

Cosimati discloses a similar pepper harvester wherein the coil (120) drive is provided by a hydraulic driven motor (126) that is safely stopped if the harvester becomes jammed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the hydraulic drive of Cosimati on the harvester of Rutt in order to optimize picking efficiency.

11. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutt in view of Boese.

The device is disclosed as applied above. Rutt further discloses wherein said flat conveyor surface (170) includes an upwardly inclined surface at its rearward end, as per claim 6.

However, Rutt fails to disclose a transverse conveyor in communication with the rearward end of the flat conveyor surface for receiving peppers moved rearwardly by said chain conveyor and transporting peppers transversely of said header, as per claim 6; and

Wherein said vehicular structure includes an upwardly extending elevator receiving peppers from said transverse conveyor and discharging them through an air separator onto a sorting conveyor, said air separator including a source of moving air to remove plant leaves and stems as peppers pass through the moving air onto said sorting conveyor, a sorting station alongside said sorting conveyor to enable sorting personnel to manually remove residual plant leaves and stems, and a loading conveyor receiving cleaned peppers from said sorting conveyor to load peppers into a collection area, as per claim 7.

Boese discloses a transverse conveyor (192) in communication with the rearward end of the flat conveyor surface (75) for receiving peppers moved rearwardly and transporting peppers transversely of the header (26), as per claim 6; and

Wherein said vehicular structure includes an upwardly extending elevator (30) receiving peppers from said transverse conveyor (192) and discharging them through an air separator (32) onto a sorting conveyor (34), said air separator (32) including a source of moving air to remove plant leaves and stems as peppers pass through the moving air onto said sorting conveyor (34), a sorting station alongside said sorting conveyor (38) to enable sorting personnel to manually remove residual plant leaves and stems, and a loading conveyor (unnumbered) receiving cleaned peppers from said sorting conveyor (38) to load peppers into a collection area (40), as per claim 7.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the transverse conveyor of Boese on the harvester of Rutt in order to convey harvested product rearwardly.

Response to Arguments

12. The abstract includes more than 150 words.

While objected to claim 5 was put into independent form, the critical part of the claim was excluded.

Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

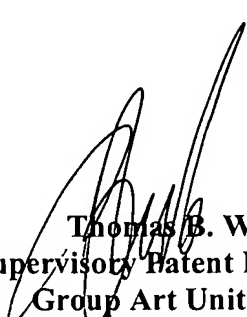
13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Torres whose telephone number is 703-305-6953. The examiner can normally be reached Monday through Thursday from 7:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at 703-308-3870.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 703-305-1113. The fax number for this Group is 703-872-9306.



Thomas B. Will
Supervisory Patent Examiner
Group Art Unit 3671